



CABLE EXITS  
(TRIPOD CABLES LOOPED DOWN  
TO PIVOT POINT ON  
CUSTOMER'S SYSTEM BASE)

ØR DIAMETER  
(MOUNTING  
SURFACE)

ØH  
(BOLT CIRCLE  
DIAMETER)

8X "L" (TAP)  
(EQUALLY SPACED  
ON BOLT CIRCLE  
DIAMETER "H")

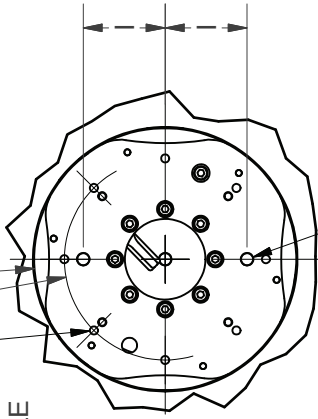
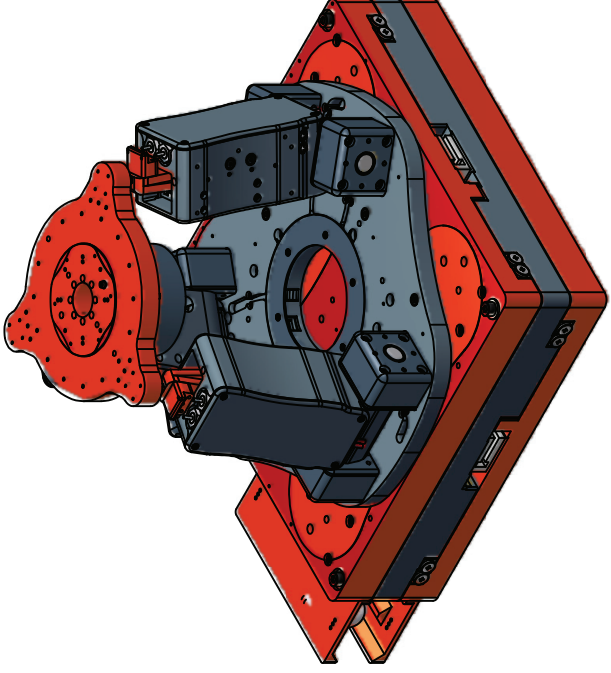
2X Ø5.0 mm (H9) ∇ 5.0 mm  
SLIP FIT FOR M5 DOWEL PIN

HEIGHT  
(AT MIDDLE OF Z  
STROKE RANGE)

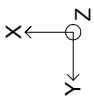
STAGE MOUNT  
8X "J" THRU  
(TOP DOWN ACCESS BY  
TRANSLATING STAGE)

8X "K" (TAP)

3X Ø5.0 mm (H9) ∇ 5.0 mm  
SLIP FIT FOR M5 DOWEL PIN



DETAIL A



**STANDARD FEATURES**

Stage	Hybrid Hexapod
Travel	6 Degrees of Freedom (X, Y, Z, Pitch, Roll, and Yaw)
XY Travel	100 - 300+ mm
Z Travel	6 - 106 mm
Angular Travel	+/- 3 to +/- 18 degrees (Pitch and Roll)
Max Payload	360 degrees continuous (Yaw)
Motor	2.0 - 7.0+ kg
Feedback	Ironless Core Linear Motor and Frameless Torque Motor
Scale	Non-Contact Optical Encoder
Linear Resolution	Gold Tape Scale and Stainless Steel Ring
Angular Resolution	Optional: Near Zero CTE ZeroMet
Sensors	~5 nm
Bearings	< 0.04 arc-sec
Counterbalance	Integrated Home and End of Travel Limits
Cables	High Precision Crossed Roller Bearings
Structure	Frictionless Pneumatic Cylinder
Environment	Optional: Non-Contact Magnetic Spring
Temperature	High Flex, 10M Cycle, 3m Length
Humidity	Anodized Aluminum 6061-T6
Precision	Optional: Stainless Steel
	Standard
	Optional: Vacuum 10-5 Torr, Vacuum 10-7 Torr
	0°C to 50°C
	10% to 80% Non-Condensing
	6-D Nano Precision™ Test Methods

XY TRAVEL	Z TRAVEL	PITCH & ROLL TRAVEL	R DIAMETER	OPTION	LENGTH	WIDTH	HEIGHT	A (inch)	B (inch)	C	D	E	F	G	H	I	J	K	L
100	6	+/- 3 degrees	56	--	244	244	223.6	6	6	175	125	170	70	52	30	22.5#	M6 or 1/4-20	M6	M3
100	6	+/- 3 degrees	56	CM	200	184	203.6	6	4	125	100	120	70	52	30	22.5#	M6 or 1/4-20	M5 (6X)	M3
100	24	+/- 12 degrees	56	--	244	244	256.7	6	6	175	125	170	70	52	30	22.5#	M6 or 1/4-20	M6	M3
100	24	+/- 12 degrees	56	CM, MS	262.5	246	230.9	6	4	125	100	120	70	52	30	22.5#	M6 or 1/4-20	M5 (6X)	M3
100	24	+/- 12 degrees	56	MS	262.5	246	250.9	6	6	175	125	170	70	52	30	22.5#	M6 or 1/4-20	M6	M3
150	40	+/- 16 degrees	56	--	331.6	304	327.9	6	6	175	125	170	70	52	30	22.5#	M6 or 1/4-20	M6	M3
200	40	+/- 12 degrees	104	--	399	359	340.4	7	5	225	200	225	100	65	80	32.5	M8 or 5/16-18	M6	M4
250	55	+/- 16 degrees	104	--	403.1	400	425.9	12	8	350	250	275x300	100	96	80	32.5	M8 or 5/16-18	M8 (6X)	M4
300	106	+/- 18 degrees	104	--	504.2	500	575	12	8	350	250	275x300	100	96	80	32.5	M8 or 5/16-18	M8 (6X)	M4

\* All units millimeters unless otherwise noted.  
 \* All hole patterns centered on M5 dowel pin at center of XY stage or centered on thru hole of top rotary stage.  
 \* See specification sheet and contact ALIO technical sales for assistance in model selection.  
 # M5 dowel pins on the mount surface are rotated 90 degrees relative to dowel pins shown on this datasheet.

ALIO INDUSTRIES PROPRIETARY INFORMATION  
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**AI-6D-(XY TRAVEL)XY-(Z TRAVEL)Z-(R DIAMETER)R**  
**-(OPTION)**

DRAWN	5/12/2012
NBROWN	
CHECKED	
Tolerances: Surface Roughness: x.x ± .05 in [1.3 mm] x.xx ± .01 in [0.25 mm] x.xxx ± .005 in [0.13 mm] Angles ± 0.5°	
MATERIAL	
FINISH	SEE NOTES
SCALE	1 OF 1

DWG NO	0010-08007	REV	003
ALIO STD TEMPLATE - REV 006	SHEET	1	OF 1

NOTE: MODEL AI-6D-250XY-55Z-104R SHOWN.

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